

Amendments to the Claims

Claim 1 (Currently amended): Seed of hybrid maize variety designated 37Y15, representative seed of said variety having been deposited under ATCC Accession number [[____]]PTA 5475.

Claim 2 (Currently amended): A maize plant, or a part thereof, produced by growing the seed of claim 1.

Claim 3 (Original): Pollen of the plant of claim 2.

Claim 4 (Original): An ovule of the plant of claim 2.

Claims 5-60 (Canceled)

Claim 61 (Previously presented): A tissue culture of regenerable cells produced from the plant of claim 2.

Claim 62 (Previously presented): Protoplasts produced from the tissue culture of claim 61.

Claim 63 (Previously presented): The tissue culture of claim 61, wherein cells of the tissue culture are from a tissue selected from the group consisting of leaf, pollen, embryo, root, root tip, anther, silk, flower, kernel, ear, cob, husk and stalk.

Claim 64 (Currently amended): A maize plant regenerated from the tissue culture of claim 61, said plant having all the morphological and physiological characteristics of hybrid maize plant 37Y15, representative seed of said plant having been deposited under ATCC Accession No. [[____]]PTA 5475.

Claim 65 (Previously presented): A method for producing an F1 hybrid maize seed, comprising crossing the plant of claim 2 with a different maize plant and harvesting the resultant F1 hybrid maize seed.

Claim 66 (Currently amended): A method of producing a male sterile hybrid maize plant comprising transforming at least one of inbred maize parent plants GE571367 and GE533418, representative samples of which have been deposited as [[_____] and _____]PTA-5527 and PTA-5519 respectively, with a nucleic acid molecule that confers male sterility and crossing said inbred maize parent plants to produce said male sterile hybrid maize plant.

Claim 67 (Previously presented): A male sterile maize hybrid plant produced by the method of claim 66.

Claim 68 (Currently amended): A method of producing an herbicide resistant hybrid maize plant comprising transforming at least one of inbred maize parent plants GE571367 and GE533418, representative samples of which have been deposited as [[_____] and _____]PTA-5527 and PTA-5519 respectively, with a transgene that confers herbicide resistance to generate an herbicide resistant inbred maize parent plant and crossing said inbred maize parent plants to produce said herbicide resistant hybrid maize plant.

Claim 69 (Previously presented): An herbicide resistant hybrid maize plant produced by the method of claim 68.

Claim 70 (Previously presented): The herbicide resistant hybrid maize plant of claim 69, wherein the transgene confers resistance to an herbicide selected from the group consisting of: imidazolinone, sulfonylurea, glyphosate, glufosinate, L-phosphinothricin, triazine and benzonitrile.

Claim 71 (Currently amended): A method of producing an insect resistant hybrid maize plant comprising transforming at least one of inbred maize parent plants GE571367 and

GE533418, representative samples of which have been deposited as [[_____] and _____]]PTA-5527 and PTA-5519 respectively, with a transgene that confers insect resistance to generate an insect resistant inbred maize parent plant and crossing said inbred maize parent plants to produce said insect resistant hybrid maize plant.

Claim 72 (Previously presented): An insect resistant hybrid maize plant produced by the method of claim 71.

Claim 73 (Previously presented): The insect resistant hybrid maize plant of claim 72, wherein the transgene encodes a *Bacillus thuringiensis* endotoxin.

Claim 74 (Currently amended): A method of producing a disease resistant hybrid maize plant comprising transforming at least one of inbred maize parent plants GE571367 and GE533418, representative samples of which have been deposited as [[_____] and _____]]PTA-5527 and PTA-5519 respectively, with a transgene that confers disease resistance to generate a disease resistant inbred maize parent plant and crossing said inbred maize parent plants to produce said disease resistant hybrid maize plant.

Claim 75 (Previously presented): A disease resistant hybrid maize plant produced by the method of claim 74.

Claim 76 (Currently amended): A method of producing a hybrid maize plant with decreased phytate content comprising transforming at least one of inbred maize parent plants GE571367 and GE533418, representative samples of which have been deposited as [[_____] and _____]]PTA-5527 and PTA-5519 respectively, with a transgene encoding phytase to generate an inbred maize parent plant with decreased phytate content and crossing said inbred maize parent plants to produce said hybrid maize plant that confers decreased phytate content.

Claim 77 (Previously presented): A hybrid maize plant with decreased phytate content produced by the method of claim 76.

Claim 78 (Currently amended): A method of producing a hybrid maize plant with modified fatty acid metabolism or modified carbohydrate metabolism comprising transforming at least one of inbred maize parent plants GE571367 and GE533418, representative samples of which have been deposited as [[_____] and _____]PTA-5527 and PTA-5519 respectively, with a transgene encoding a protein selected from the group consisting of stearyl-ACP desaturase, fructosyltransferase, levansucrase, alpha-amylase, invertase and starch branching enzyme to generate an inbred maize parent plant with modified fatty acid metabolism or modified carbohydrate metabolism and crossing said inbred maize parent plants to produce said hybrid maize plant that confers modified fatty acid metabolism or modified carbohydrate metabolism.

Claim 79 (Previously presented): A hybrid maize plant produced by the method of claim 78.

Claim 80 (Previously presented): The hybrid maize plant of claim 79 wherein the transgene confers a trait selected from the group consisting of waxy starch and increased amylase starch.

Claim 81 (Currently amended): A maize plant, or a part thereof, having all the physiological and morphological characteristics of the hybrid maize plant 37Y15, representative seed of said plant having been deposited under ATCC Accession No. [[_____]PTA 5475.

Claim 82 (Currently amended): A method of introducing a desired trait into a hybrid maize ~~line~~ variety 37Y15 comprising:

(a) crossing at least one of inbred maize parent plants GE571367 and GE533418, representative samples of which have been deposited under ATCC Accession Nos. as [[_____] and _____]PTA-5527 and PTA-5519 respectively, with another maize line that comprises a desired trait, to produce F1 progeny plants, wherein the desired trait is selected from the group consisting of male sterility, herbicide resistance, insect resistance, disease resistance and waxy starch;

(b) selecting said F1 progeny plants that have the desired trait to produce selected F1 progeny plants;

(c) backcrossing the selected progeny plants with said inbred maize parent plant to produce backcross progeny plants;

(d) selecting for backcross progeny plants that have the desired trait and morphological and physiological characteristics of said inbred maize parent plant;

(e) repeating steps (c) and (d) three or more times in succession to produce selected fourth or higher backcross progeny plants;

(f) crossing said fourth or higher backcross progeny plant with the other inbred maize parent plant to generate a hybrid maize ~~line~~ variety 37Y15 with the desired trait and all of the morphological and physiological characteristics of hybrid maize ~~line~~ variety 37Y15 listed in Table 1 as determined at the 5% significance level when grown in the same environmental conditions.

Claim 83 (Currently amended): A plant produced by the method of claim 82, wherein the plant has the desired trait and all of the physiological and morphological characteristics of hybrid maize ~~line~~ variety 37Y15 listed in Table 1 as determined at the 5% significance level when grown in the same environmental conditions.

Claim 84 (Previously presented): The plant of claim 83 wherein the desired trait is herbicide resistance and the resistance is conferred to an herbicide selected from the group consisting of: imidazolinone, sulfonylurea, glyphosate, glufosinate, L-phosphinothricin, triazine and benzonitrile.

Claim 85 (Previously presented): The plant of claim 83 wherein the desired trait is insect resistance and the insect resistance is conferred by a transgene encoding a *Bacillus thuringiensis* endotoxin.

Claim 86 (Previously presented): The plant of claim 83 wherein the desired trait is male sterility and the trait is conferred by a cytoplasmic nucleic acid molecule that confers male sterility.

Claim 87 (Currently amended): A method of modifying fatty acid metabolism, phytic acid metabolism or carbohydrate metabolism in a hybrid maize ~~line~~ variety 37Y15 comprising:

(a) crossing at least one of inbred maize parent plants GE571367 and GE533418, representative samples of which have been deposited under ATCC Accession Nos. as [[_____] and _____]]PTA-5527 and PTA-5519 respectively, with another maize line that comprises a nucleic acid molecule encoding an enzyme selected from the group consisting of phytase, stearyl-ACP desaturase, fructosyltransferase, levansucrase, alpha-amylase, invertase and starch branching enzyme;

(b) selecting said F1 progeny plants that have said nucleic acid molecule to produce selected F1 progeny plants;

(c) backcrossing the selected progeny plants with said inbred maize parent plant to produce backcross progeny plants;

(d) selecting for backcross progeny plants that have said nucleic acid molecule and morphological and physiological characteristics of said inbred maize parent plant;

(e) repeating steps (c) and (d) three or more times in succession to produce selected fourth or higher backcross progeny plants;

(f) crossing said fourth or higher backcross progeny plant with the other inbred maize parent plant to generate a hybrid maize ~~line~~ variety 37Y15 that comprises said nucleic acid molecule and has all of the morphological and physiological characteristics of hybrid maize ~~line~~ variety 37Y15 listed in Table 1 as determined at the 5% significance level when grown in the same environmental conditions.

Claim 88 (Currently amended): A plant produced by the method of claim 87, wherein the plant comprises the nucleic acid molecule and has all of the physiological and morphological characteristics of hybrid maize ~~line~~ variety 37Y15 listed in Table 1 as determined at the 5% significance level when grown in the same environmental conditions.

Claim 89 (Previously presented): A method for producing a maize seed, comprising crossing the plant of claim 2 with itself or a different maize plant and harvesting the resultant maize seed.